

IN THE CLAIMS

Claims 1-8 (canceled)

Claim 9 (currently amended): ~~An oil extraction~~ A system comprising:

- a reservoir for holding a solvent liquid;
- an extraction tank for flowing the solvent liquid through an oil containing material for the solvent to extract oil from the material to yield a mixture of the solvent and the oil;
- a distillation tank for distilling off the solvent from the mixture ~~in the form of~~ as a solvent vapor;
- a pump configured to pump the solvent liquid from the reservoir to the extraction tank; and
- a thermal drive apparatus configured to thermally drive the solvent vapor from the distillation tank back to the reservoir by producing a temperature in the distillation tank that is high enough to evaporate the solvent and a temperature at the reservoir that is low enough to condense the solvent.

Claim 10 (original): The system of claim 9 wherein the thermal drive apparatus includes a heating device for heating the mixture in the distillation tank and a cooling device for cooling the solvent in the reservoir, to produce a temperature differential between the reservoir and the distillation tank.

Claim 11 (original): The system of claim 9 further including a chiller, connected between the distillation tank and the reservoir, that is located above the reservoir and that cools the solvent vapor from the distillation tank for the solvent vapor to condense and fall into the reservoir.

Claim 12 (original): The system of claim 9 configured for the solvent to flow cyclically through the reservoir, the extraction tank and the distillation tank.

Claim 13 (original): The system of claim 9 configured for the solvent to flow simultaneously through the reservoir, the extraction tank and the distillation tank.

Claim 14 (currently amended): ~~An oil extraction~~ apparatus comprising:

first and second oil extraction systems, each system including a reservoir for holding a solvent in liquid phase, an extraction tank for receiving and flowing the solvent liquid through an oil containing material for the solvent to extract oil from the material to yield a liquid mixture of the solvent and the oil, a distillation tank for receiving the solvent/oil mixture and distilling off the solvent from the oil ~~in the form of~~ as a solvent vapor, and a return line for returning the solvent vapor to the reservoir while leaving the oil in the distillation tank; and

an oil collection tank connected to both ~~distillation tanks~~ the distillation tank of the first system and the distillation tank of the second system for collecting the oil from both distillation tanks.

Claim 15 (currently amended): The ~~oil extraction~~ apparatus of claim 14 wherein each system further comprises a pump for pumping the solvent from the reservoir to the extraction tank and a thermal drive apparatus configured to thermally drive the solvent from the distillation tank to the reservoir by producing a temperature in the distillation tank that is high enough to evaporate the solvent and a temperature at the reservoir that is low enough to condense the solvent.

Claim 16 (currently amended): The ~~oil extraction~~ apparatus of claim 14 wherein each system is configured to be closed to the atmosphere during the flowing, the extracting and the distilling, and further configured to enable replacing the solvent with a second solvent while the system remains closed to the atmosphere.

Claim 17 (currently amended): ~~An oil extraction~~ A system comprising:

a reservoir for holding a solvent liquid;

an extraction tank for flowing the solvent liquid through an oil containing material for the solvent to extract oil from the material to yield a mixture of the solvent and the oil;

a distillation tank for distilling off the solvent from the mixture ~~in the form of~~ as a solvent vapor; and

a return line for returning the solvent vapor back to the reservoir; and

means for replacing the solvent in the system with a second solvent while the system remains closed to the atmosphere

~~the system being configured to be closed to the atmosphere during the flowing, the extracting and the distilling, and further configured to enable replacing the solvent in the system with a second solvent while the system remains closed to the atmosphere.~~

Claim 18 (currently amended): ~~An oil extraction~~ A system comprising:

a reservoir for holding a solvent liquid;

an extraction tank for flowing the solvent liquid through an oil containing material for the solvent to extract oil from the material to yield a mixture of the solvent and the oil;

a distillation tank for distilling off the solvent from the mixture ~~in the form of~~ as a solvent vapor; and

a thermal driving apparatus configured to thermally drive the solvent vapor from the distillation tank to the reservoir, the apparatus comprising a heat pump having a cold side configured to withdraw heat from the system at the reservoir and having a hot side configured to add the heat back to the system at the distillation tank.

Claim 19 (currently amended): ~~An oil extraction~~ A system comprising:

a reservoir for holding a solvent liquid;

an extraction tank for flowing the solvent liquid through an oil containing material for the solvent to extract oil from the material to yield a mixture of the solvent and the oil;

a distillation tank for distilling off the solvent from the mixture ~~in the form of~~ as a solvent vapor; and

a line, closed to the atmosphere, for conducting the liquid solvent from the reservoir to the extraction tank, and conducting the mixture from the extraction tank to the distillation tank, and conducting the solvent vapor from the distillation tank to the reservoir; and

a purge tank for purging, from the line, a contaminant that is more volatile than the solvent without interrupting the flowing, the distilling and the conducting, the purge tank having an inlet for receiving the solvent and the contaminant from the line, a cooling device for condensing the solvent but not the contaminant, a lower outlet for discharging the condensed solvent back into line, and an upper outlet for discharging the contaminant into the atmosphere.

Claims 20-22 (canceled)